

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 52 and 81

[EPA-R05-OAR-2011-0596; FRL-9837-9]

Approval and Promulgation of Air Quality Implementation Plans;

Ohio; Redesignation of the Dayton-Springfield Area to Attainment

of the 1997 Annual Standard for Fine Particulate Matter;

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing to approve the State of Ohio's request to redesignate the Dayton-Springfield nonattainment area (Dayton) to attainment for the 1997 annual National Ambient Air Quality Standards (NAAQS or standard) for fine particulate matter $(PM_{2.5})$. EPA is also proposing to approve the related elements including emissions inventories, maintenance plans, and the accompanying motor vehicle budgets. EPA is proposing to approve a comprehensive emissions inventory that meets the Clean Air Act (CAA) requirement. EPA is proposing that the inventories for nitrogen oxides (NO_X) , direct $PM_{2.5}$, sulfur dioxide (SO₂), ammonia, and volatile organic compounds (VOC) meet the CAA emissions inventory requirement. In the course of proposing to approve Ohio's request to redesignate the Dayton area, EPA addresses a number of additional issues, including the effects of two decisions of the United States Court of Appeals for the District of Columbia (D.C. Circuit or Court): (1) the

Court's August 21, 2012, decision to vacate and remand to EPA the Cross-State Air Pollution Control Rule (CSAPR) and (2) the Court's January 4, 2013, decision to remand to EPA two final rules implementing the 1997 $PM_{2.5}$ standard.

DATES: Comments must be received on or before [INSERT DATE 30 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-R05-OAR-2011-0596, by one of the following methods:

- www.regulations.gov: Follow the on-line instructions for submitting comments.
- 2. E-mail: blakley.pamela@epa.gov.
- 3. Fax: (312) 692-2450.
- 4. Mail: Pamela Blakley, Chief, Control Strategies Section,
 Air Programs Branch (AR-18J), U.S. Environmental Protection
 Agency, 77 West Jackson Boulevard, Chicago, Illinois 60604.
- 5. Hand delivery: Pamela Blakley, Chief, Control Strategies
 Section, Air Programs Branch (AR-18J), U.S. Environmental
 Protection Agency, 77 West Jackson Boulevard, Chicago,
 Illinois 60604. Such deliveries are only accepted during
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 arrangements should be made for deliveries of boxed
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business are Monday through Friday, 8:30 AM to 4:30 PM, excluding Federal holidays.

Instructions: Direct your comments to Docket ID No. EPA-R05-OAR-2011-0596. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at www.regulations.gov, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through www.regulations.gov or e-mail. www.regulations.gov website is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through www.regulations.gov, your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional instructions on submitting comments, go to Section I of this document, "What Should I Consider as I Prepare My Comments for EPA?"

Docket: All documents in the docket are listed in the www.regulations.gov index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in www.regulations.gov or in hard copy at the Environmental Protection Agency, Region 5, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604. This facility is open from 8:30 AM to 4:30 PM, Monday through Friday, excluding Federal holidays. We recommend that you telephone Matt Rau, Environmental Engineer, at (312) 886-6524 before visiting the Region 5 office.

FOR FURTHER INFORMATION CONTACT: Matt Rau, Environmental Engineer, Control Strategies Section, Air Programs Branch (AR-18J), Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, (312) 886-6524, rau.matthew@epa.gov.

SUPPLEMENTARY INFORMATION: Throughout this document whenever

- "we," "us," or "our" is used, we mean EPA. This supplementary information section is arranged as follows:
- I. What Should I Consider as I Prepare My Comments for EPA?
- II. What Is the Background for the Proposal?
- III. What are the Criteria for Redesignation to Attainment?
- IV. What is EPA's Analysis of Ohio's Request?
 - A. Attainment Determination and Redesignation
 - B. Comprehensive Emissions Inventories
 - C. Motor Vehicle Emission Budgets (MVEBs)
- V. Summary of Proposed Actions
- VI. Statutory and Executive Order Reviews
- I. What Should I Consider as I Prepare My Comments for EPA?
 When submitting comments, remember to:
- 1. Identify the rulemaking by docket number and other identifying information (subject heading, <u>Federal Register</u> date, and page number).
- 2. Follow directions EPA may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.
- 3. Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.
- 4. Describe any assumptions and provide any technical information and/or data that you used.
 - 5. If you estimate potential costs or burdens, explain

how you arrived at your estimate in sufficient detail to allow for it to be reproduced.

- 6. Provide specific examples to illustrate your concerns, and suggest alternatives.
- 7. Explain your views as clearly as possible, avoiding the use of profanity or personal threats.
- 8. Make sure to submit your comments by the comment period deadline identified.

II. What Is the Background for the Proposal?

On June 1, 2011, Ohio submitted a request for EPA to redesignate the Dayton-Springfield, Ohio nonattainment area to attainment of the 1997 annual $PM_{2.5}$ NAAQS. Ohio also requested EPA approval of the state implementation plan (SIP) revision containing an emissions inventory and a maintenance plan for the area.

In a supplemental submission to EPA on April 30, 2013, Ohio submitted ammonia and VOC emissions inventories to supplement the emissions inventories for $PM_{2.5}$, NO_x , and SO_2 that were submitted on June 1, 2011.

Air quality standards for $PM_{2.5}$ were promulgated on July 18, 1997, at 62 FR 38652. EPA promulgated an annual standard at a level of 15 micrograms per cubic meter ($\mu g/m^3$), based on a three-year average of annual mean $PM_{2.5}$ concentrations. In the same rulemaking, EPA set a 24-hour standard of 65 $\mu g/m^3$, based on a

three-year average of the $98^{\rm th}$ percentile of 24-hour concentrations.

On January 5, 2005, at 70 FR 944, EPA designated the Dayton area as nonattainment for the 1997 $PM_{2.5}$ air quality standards. EPA defined the Dayton-Springfield nonattainment area to include Clark, Greene, and Montgomery Counties in Ohio.

On October 17, 2006, at 71 FR 61144, EPA retained the annual average standard at 15 $\mu g/m^3$, but revised the 24-hour standard to 35 $\mu g/m^3$, based again on the three-year average of the 98th percentile of 24-hour concentrations.

In response to legal challenges of the annual standard promulgated in 2006, the D.C. Circuit remanded the standard to EPA for further consideration. See American Farm Bureau Federation and National Pork Producers Council, et al. v. EPA, 559 F.3d 512 (D.C. Cir. 2009). On December 14, 2012, EPA finalized a rule revising the $PM_{2.5}$ annual standard to 12 $\mu g/m^3$ based on current scientific evidence regarding the protection of public health. EPA is not addressing the 2012 annual $PM_{2.5}$ standard in this proposal.

On September 14, 2011, at 76 FR 56641, EPA issued a final determination that the Dayton area attained the 1997 annual $PM_{2.5}$ standard by the applicable attainment date of April 5, 2010, based on certified ambient monitoring data for the 2007-2009 monitoring period.

Fine particle pollution can be emitted directly or formed secondarily through chemical reactions in the atmosphere. Sulfates are a type of secondary particle formed from SO_2 emissions from power plants and industrial facilities. Nitrates, another common type of secondary particle, are formed from emissions of NO_x from power plants, automobiles, and other combustion sources.

Given the significance of sulfates and nitrates in the Dayton area, the area's air quality is strongly affected by regulations of SO_2 and $NO_{\rm x}$ emissions from power plants. EPA proposed the Clean Air Interstate Rule (CAIR) on January 30, 2004, at 69 FR 4566, promulgated CAIR on May 12, 2005, at 70 FR 25162, and promulgated associated Federal implementation plans (FIPs) on April 28, 2006, at 71 FR 25328, in order to reduce SO_2 and NO_x emissions and improve air quality in many areas in the eastern and Midwestern United States. However, on July 11, 2008, the D.C. Circuit issued a decision to vacate and remand both CAIR and the associated CAIR FIPs in their entirety (North Carolina v. EPA, 531 F.3d 836 (D.C. Cir. 2008)). EPA petitioned for rehearing, and the Court issued an order remanding CAIR and the CAIR FIPs to EPA without vacatur (North Carolina v. EPA, 550 F.3d 1176 (D.C. Cir. 2008)). The Court, thereby, left CAIR in place in order to "temporarily preserve the environmental values covered by CAIR" until EPA replaces it with a rule consistent

with the Court's opinion. *Id.* at 1178. The Court directed EPA to "remedy CAIR's flaws" consistent with its July 11, 2008, opinion, but declined to impose a schedule on EPA for completing that action.

EPA issued CSAPR on August 8, 2011, at 76 FR 48208. CSAPR addresses interstate transport of emissions with respect to the 1997 ozone and the 1997 and 2006 $PM_{2.5}$ NAAQS, and thus replaces CAIR. CSAPR requires substantial reductions of SO_2 and NO_x emissions from electric generating units (EGUs) across most of the Eastern and Midwestern United States. CSAPR established permanent and enforceable limits on EGU emissions across 28 states.

In this proposed redesignation, EPA takes into account two recent decisions of the D.C. Circuit. In the first of the two Court decisions, the D.C. Circuit, on August 21, 2012, issued EME Homer City Generation, L.P. v. EPA, 696 F.3d 7 (D.C. Cir. 2012), which vacated and remanded CSAPR and ordered EPA to continue administering CAIR "pending... development of a valid replacement." EME Homer City at 38. The D.C. Circuit denied all petitions for rehearing on January 24, 2013. In the second decision, on January 4, 2013, in Natural Resources Defense Council v. EPA, the D.C. Circuit remanded to EPA the "Final Clean Air Fine Particle Implementation Rule" (72 FR 20586, April 25, 2007) and the "Implementation of the New Source Review (NSR)

Program for Particulate Matter Less than 2.5 Micrometers $(PM_{2.5})''$ final rule (73 FR 28321, May 16, 2008). 706 F.3d 428 (D.C. Cir. 2013).

III. What are the Criteria for Redesignation to Attainment?

The requirements for redesignating an area from nonattainment to attainment are found in CAA section 107 (d)(3)(E). There are five criteria for redesignating an area. First, the Administrator must determine that an area has attained the applicable NAAQS based on current air quality data. Second, the Administrator has fully approved the applicable SIP for the area under CAA section 110(k). The third criterion is for the Administrator to determine that the air quality improvement is the result of permanent and enforceable emission reductions. Emission reductions resulting from requirements approved into the SIP and from Federal air pollution control requirements are considered permanent and enforceable. Fourth, the Administrator has fully approved a maintenance plan meeting the CAA section 175A requirements. The fifth criterion is that the state has met all the redesignation requirements of CAA section 110 and part D.

IV. What is EPA's Analysis of Ohio's Request?

A. Attainment Determination and Redesignation

EPA is proposing to determine that the Dayton area continues to attain the $PM_{2.5}$ annual standard. EPA is also

proposing to approve Ohio's maintenance plans for the area and to determine that the area has met all other applicable redesignation criteria under CAA section 107(d)(3)(E). The basis for EPA's proposed approval of the redesignation requests is as follows:

1. The Area Has Attained the 1997 Annual PM2.5 NAAQS

EPA examined monitoring data to determine if the area currently meets the $PM_{2.5}$ annual standard, as determined in accordance with 40 CFR 50.7 and part 50, appendix N, based on three complete consecutive calendar years of quality-assured air quality monitoring data. EPA is proposing to find that the Dayton area is continuing to meet the annual $PM_{2.5}$ standard. The monitoring data for the Dayton area are found on Table 1.

Table 1. Dayton Area Annual $PM_{2.5}$ Monitoring Data ($\mu g/m^3$)

County	2008-2010	2009-2011	2010-2012
Clark	12.7	12.6	11.9
Greene	12.1	12.0	11.4
Montgomery	13.2	12.9	12.3

EPA makes the determination of whether an area's air quality is meeting the $PM_{2.5}$ NAAQS primarily based upon data gathered from the air quality monitoring sites that have been entered into EPA's Air Quality System (AQS) database. To show attainment of the annual standard for $PM_{2.5}$, the most recent three consecutive years of data prior to the area's attainment

date must show that $PM_{2.5}$ concentrations over a three-year period are at or below the level of the standard, 15.0 $\mu g/m^3$.

Ohio submitted its requests based on 2008 to 2010 monitoring data showing that the Dayton area continues to attain the PM_{2.5} standard. Monitoring data for 2011 and 2012 became available from AQS since Ohio submitted its request. The 2010 to 2012 design values above reflect preliminary calculations of design value based on quality assured, certified air quality data. Thus, EPA also examined the 2009 to 2011 and 2010 to 2012 averages for each monitoring site in the Dayton area. This current monitoring data as presented on Table 1 shows that the area continues to attain the annual standard.

Greene County has a single PM_{2.5} monitor, site 39-057-0005, located in Yellow Springs. This site has operated since October 2003, but it had just a 45 percent data capture in the third quarter of 2010. EPA's completeness criterion is 75 percent data capture for every quarter. Thus, the 2010 data are incomplete, as are all three-year periods that include 2010 data. Ohio explained in its submission that the Greene County monitor was down from August 12 to September 29, 2010, due to repairs to the roof of the building hosting the monitoring site. EPA data shows that this monitor had at least 93 percent data capture in the other 11 quarters in the 2009 to 2011 period.

complete and thus EPA finds the Greene County monitor to have 11 complete quarters of data for the 2010 to 2012 period.

EPA examined air quality in Greene County in several ways. First, EPA examined data for the most recent complete three years of data at this site. The most recent three-year period with complete data is 2007 to 2009, during which Greene County recorded a design value of $12.1~\mu\text{g/m}^3$, which is well below the standard. These data, in combination with the subsequent incomplete data suggesting continued attainment, provide adequate evidence that this location is attaining the standard.

Second, Ohio performed an analysis of the missing data for the Greene County monitoring site. Ohio substituted data from the other monitors in the Dayton area for the 17 missing values from August and September 2010. There are two other monitors in the area, one each in Clark and Montgomery Counties. The state determined that the Clark County monitor data had a 0.9236 correlation with the Greene County data. The substitute values in the third quarter actually lower the 2010 average from 13.2 to $12.2~\mu g/m^3$.

Third, EPA examined the monitoring data history for Greene County. The site recorded an average of 17.24 $\mu g/m^3$ for the third quarter of 2010, which compares to the average of 14.43 $\mu g/m^3$ for Clark County and 14.84 $\mu g/m^3$ for Montgomery County. The 2010 average for the sites are closer with Greene County

having a 13.2 $\mu g/m^3$ annual average, Clark County was at 13.1 $\mu g/m^3$, and 14.0 $\mu g/m^3$ for Montgomery County.

Looking back further, Greene County has recorded annual design values of 13.6 $\mu g/m^3$ in 2005 to 2007, 12.3 $\mu g/m^3$ in 2006 to 2008, and 12.1 μ g/m³ in 2007 to 2009. The annual design values for Clark County are 14.8 μ g/m³ in 2005 to 2007, 13.5 $\mu q/m^3$ in 2006 to 2008, and 13.3 $\mu q/m^3$ in 2007 to 2009. Montgomery County annual design values are 15.5 μ g/m³ in 2005 to 2007, 14.2 $\mu g/m^3$ in 2006 to 2008, and 13.8 $\mu g/m^3$ in 2007 to 2009. The design value history shows that the ambient air quality in Greene County has consistently had the lowest design value in the Dayton area, while Montgomery County recorded the area's highest design values. The 2010 design value for Greene County was similar to the Clark County value, while remaining lower than the Montgomery County value. This can be attributed to uncharacteristically high 2010 third quarter average that had 17 missing values. Ohio analysis showed that adding typical values for the missing data would have lowered the 2010 average. The 2008 to 2010, 2009 to 2011, and the preliminary 2010 to 2012 Greene County design values are well below the $PM_{2.5}$ standard. The other two monitors recorded values moderately below the standard during 2010's third quarter. Thus, it is likely that the 2008 to 2010, 2009 to 2011, and 2010 to 2012 Greene County

design values would not have been any higher had site 39-057-0005 recorded complete data for the third quarter of 2010.

For all these reasons, EPA believes that the Dayton area continues to attain the annual $PM_{2.5}$ standard based on current data.

2. The Area Has Met All Applicable Requirements under Section 110 and Part D; and the Area Has a Fully Approved SIP under Section 110(k)

The requirements for a state to have a fully approved SIP meeting all relevant requirements are specified in CAA sections 107(d)(3)(E)(ii) and 107(d)(3)(E)(v).

EPA has determined that Ohio has met all currently applicable SIP requirements for purposes of redesignation for the Dayton area under CAA section 110, general SIP requirements. EPA has also determined that the Ohio SIP meets all SIP requirements currently applicable for purposes of redesignation in accordance with section 107(d)(3)(E)(v). In addition, with the exception of the emissions inventory under section 172(c)(3), we have approved all applicable requirements of the Ohio SIP for purposes of redesignation, in accordance with section 107(d)(3)(E)(ii). As discussed below, in this action EPA is proposing to approve Ohio's 2005 and 2008 emissions inventories as meeting the section 172(c)(3) comprehensive emissions inventory requirement.

In making these determinations, EPA ascertained what SIP requirements are applicable to the area for purposes of this redesignation and determined that the portions of the SIP meeting these requirements are fully approved under section 110(k) of the CAA. SIPs must be fully approved only with respect to currently applicable requirements of the CAA.

- a. The Dayton Area Has Met All Applicable Requirements for Purposes of Redesignation under Section 110 and Part D of the CAA
- i. Section 110(a) General SIP Requirements

Section 110(a) of title I of the CAA contains the general requirements for a SIP. Section 110(a)(2) provides that the implementation plan submitted by a state must have been adopted by the state after reasonable public notice and hearing, and, among other things, must: include enforceable emission limitations and other control measures, means or techniques necessary to meet the requirements of the CAA; provide for establishment and operation of appropriate devices, methods, systems, and procedures necessary to monitor ambient air quality; provide for implementation of a source permit program to regulate the modification and construction of any stationary source within the areas covered by the plan; include provisions for the implementation of part C, Prevention of Significant Deterioration (PSD) and part D, NSR permit programs; include

criteria for stationary source emission control measures, monitoring, and reporting; include provisions for air quality modeling; and provide for public and local agency participation in planning and emission control rule development.

Section 110(a)(2)(D) of the CAA requires that SIPs contain measures to prevent sources in a state from significantly contributing to air quality problems in another state. EPA holds that the requirements linked with a particular nonattainment area's designation are the relevant measures to evaluate in reviewing a redesignation request. The transport SIP submittal requirements, where applicable, continue to apply to a state regardless of the designation of any one particular area in the state. Thus, we conclude that these requirements should not be construed to be applicable requirements for purposes of redesignation.

EPA believes that section 110 elements not connected with nonattainment plan submissions and not linked to an area's nonattainment status are not applicable requirements for redesignations. EPA reviews the state's request to redesignate an area to attainment based on the CAA requirements.

This approach is consistent with EPA's existing policy on applicability of conformity and oxygenated fuels requirements for redesignation purposes, as well as with section 184 ozone transport requirements. See Reading, Pennsylvania, proposed and

final rulemakings (61 FR 53174-53176, October 10, 1996) and (62 FR 24826, May 7, 1997); Cleveland-Akron-Lorain, Ohio, final rulemaking (61 FR 20458, May 7, 1996); and Tampa, Florida, final rulemaking (60 FR 62748, December 7, 1995). See also the discussion on this issue in the Cincinnati, Ohio 1-hour ozone redesignation (65 FR 37890, June 19, 2000), and in the Pittsburgh, Pennsylvania 1-hour ozone redesignation (66 FR 50399, October 19, 2001).

We have reviewed the Ohio SIP and have concluded that it meets the general SIP requirements under section 110 of the CAA to the extent they are applicable for purposes of redesignation. EPA has previously approved provisions of Ohio's SIP addressing section 110 requirements, including provisions addressing particulate matter, at 40 CFR 52.1870. On December 5, 2007, and September 4, 2009, Ohio made submittals addressing "infrastructure SIP" elements required by section 110(a)(2) of the CAA. EPA approved elements of Ohio's submittals on July 13, 2011, at 76 FR 41075. The requirements of section 110(a)(2), however, are statewide requirements that are not linked to the PM2.5 nonattainment status of the Dayton area. Therefore, EPA believes that these SIP elements are not applicable requirements for purposes of review of the Ohio PM2.5 redesignation requests.

ii. Part D Requirements

EPA is proposing to determine that, upon approval of the base year emissions inventories discussed in section IV.B., the Ohio SIP will meet the applicable SIP requirements for the Dayton area applicable for purposes of redesignation under part D of the CAA. Subpart 1 of part D, found in sections 172-176 of the CAA, sets forth the basic nonattainment requirements applicable to all nonattainment areas. Subpart 4 of part D, found in sections 185-190 of the CAA, provides more specific requirements for particulate matter nonattainment areas.

(1) Subpart 1

(a) Section 172 Requirements

For purposes of evaluating these redesignation requests, the applicable section 172 SIP requirements for the Dayton area are contained in sections 172(c)(1)-(9). A thorough discussion of the requirements contained in section 172 can be found in the General Preamble for Implementation of Title I (57 FR 13498, April 16, 1992).

Section 172(c)(1) requires the plans for all nonattainment areas to provide for the implementation of all Reasonably Available Control Measures (RACM) as expeditiously as practicable and to provide for attainment of the primary NAAQS. EPA interprets this requirement to impose a duty on all nonattainment areas to consider all available control measures and to adopt and implement such measures as are reasonably

available for implementation in each area as components of the area's attainment demonstration. Since attainment has been reached, no additional measures are needed to provide for attainment, and section 172(c)(1) requirements are no longer considered to be applicable as long as the area continues to attain the standard until redesignation. See 40 CFR 51.1004(c). The Reasonable Further Progress (RFP) requirement under section 172(c)(2) is defined as progress that must be made toward attainment. This requirement is not relevant for purposes of this redesignation because the Dayton area is monitoring attainment of the 1997 annual $PM_{2.5}$ NAAQS. The requirement to submit the section 172(c)(9) contingency measures is similarly not applicable for purposes of this redesignation.

Section 172(c)(3) requires submission and approval of a comprehensive, accurate, and current inventory of actual emissions. Ohio submitted 2005 and 2008 emissions inventories along with their redesignation request and supplemented the inventories on April 30, 2013. As discussed in section IV.B., EPA is proposing to approve the 2005 and 2008 emission inventories as meeting the section 172(c)(3) emissions inventory requirement for the Dayton area.

Section 172(c)(4) requires the identification and quantification of allowable emissions for major new and modified stationary sources in an area, and section 172(c)(5) requires

source permits for the construction and operation of new and modified major stationary sources anywhere in the nonattainment EPA approved Ohio's current NSR program on January 10, 2003 (68 FR 1366). Nonetheless, since PSD requirements will apply after redesignation, the area does not need to have a fully-approved NSR program for purposes of redesignation, provided that the area demonstrates maintenance of the NAAQS without part D NSR. A detailed rationale for this view is described in a memorandum from Mary Nichols, Assistant Administrator for Air and Radiation, dated October 14, 1994, entitled, "Part D New Source Review Requirements for Areas Requesting Redesignation to Attainment" (Nichols memorandum). Ohio has demonstrated that the Dayton area will be able to maintain the standard without part D NSR in effect; therefore, the state does not need to have a fully approved part D NSR program prior to approval of the redesignation request. Ohio's PSD program will become effective in the Dayton area upon redesignation to attainment. See rulemakings for Detroit, Michigan (60 FR 12467-12468, March 7, 1995); Cleveland-Akron-Lorain, Ohio (61 FR 20458, 20469-20470, May 7, 1996); Louisville, Kentucky (66 FR 53665, October 23, 2001); and Grand Rapids, Michigan (61 FR 31834-31837, June 21, 1996).

Section 172(c)(6) requires the SIP to contain control measures necessary to provide for attainment of the standard.

As attainment has been reached, no additional measures are needed to provide for attainment.

Section 172(c)(7) requires the SIP to meet the applicable provisions of section 110(a)(2). As noted, EPA finds that the Ohio SIP meets the section 110(a)(2) requirements applicable for purposes of redesignation.

(b) Section 176 Conformity Requirements

Section 176(c) of the CAA requires states to establish criteria and procedures to ensure that Federally-supported or funded activities, including highway projects, conform to the air quality planning goals in the applicable SIPs. The requirement to determine conformity applies to transportation plans, programs, and projects developed, funded, or approved under title 23 of the U.S. Code and the Federal Transit Act (transportation conformity) as well as to all other Federally-supported or funded projects (general conformity).

Section 176(c) of the CAA was amended by provisions contained in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which was signed into law on August 10, 2005 (Public Law 109-59). Among the changes Congress made to this section of the CAA were streamlined requirements for state transportation conformity SIPs. State transportation conformity regulations must be consistent with Federal conformity regulations and

address three specific requirements related to consultation, enforcement, and enforceability. EPA believes that it is reasonable to interpret the transportation conformity SIP requirements as not applying for purposes of evaluating the redesignation request under section 107(d) for two reasons.

First, the requirement to submit SIP revisions to comply with the transportation conformity provisions of the CAA continues to apply to areas after redesignation to attainment since such areas would be subject to a section 175A maintenance plan. Second, EPA's Federal conformity rules require the performance of conformity analyses in the absence of Federally-approved state rules. Therefore, because areas are subject to the transportation conformity requirements regardless of whether they are redesignated to attainment and, because they must implement conformity under Federal rules if state rules are not yet approved, EPA believes it is reasonable to view these requirements as not applying for purposes of evaluating a redesignation request. See Wall v. EPA, 265 F.3d 426 (6th Cir. 2001), upholding this interpretation. See also 60 FR 62748,

EPA approved Ohio's general conformity SIP on March 11, 1996 (61 FR 9646), and Ohio's transportation conformity SIP on and May 30, 2000 (65 FR 34395), and April 27, 2007 (72 FR 20945). Ohio is in the process of updating its approved

transportation conformity SIP, and EPA will review its provisions when they are submitted. Ohio also submitted onroad motor vehicle emission budgets for transportation conformity purposes, which EPA reviews in section IV.C below.

(2) Effect of the January 4, 2013, D.C. Circuit Decision Regarding $PM_{2.5}$ Implementation under Subpart 4

(a) Background

As discussed above, on January 4, 2013, in Natural Resources Defense Council v. EPA, the D.C. Circuit remanded to EPA the "Final Clean Air Fine Particle Implementation Rule" (72 FR 20586, April 25, 2007) and the "Implementation of the New Source Review (NSR) Program for Particulate Matter Less than 2.5 Micrometers (PM2.5)" final rule (73 FR 28321, May 16, 2008) (collectively, "1997 PM2.5 Implementation Rule"). 706 F.3d 428 (D.C. Cir. 2013). The Court found that EPA erred in implementing the 1997 PM2.5 NAAQS pursuant to the general implementation provisions of subpart 1 of part D of title I of the CAA, rather than the particulate-matter-specific provisions of subpart 4 of part D of title I.

2. Proposal on This Issue

EPA is proposing to determine that the Court's January 4, 2013, decision does not prevent EPA from redesignating the Dayton area to attainment. Even in light of the Court's decision, redesignation for this area is appropriate under the

CAA and EPA's longstanding interpretations of the CAA's provisions regarding redesignation.

i. Applicable Requirements for Purposes of Evaluating the Redesignation Request

With respect to the 1997 $PM_{2.5}$ Implementation Rule, the D.C. Circuit's January 4, 2013, ruling rejected EPA's reasons for implementing the $PM_{2.5}$ NAAQS solely in accordance with the provisions of subpart 1, and remanded that matter to EPA, so that it could address implementation of the 1997 PM2.5 NAAQS under subpart 4 of part D of the CAA, in addition to subpart 1. For the purposes of evaluating Ohio's redesignation request for the area, to the extent that implementation under subpart 4 would impose additional requirements for areas designated nonattainment, EPA believes that those requirements are not "applicable" for the purposes of CAA section 107(d)(3)(E), and thus EPA is not required to consider subpart 4 requirements for the Dayton redesignation. Under its longstanding interpretation of the CAA, EPA has interpreted section 107(d)(3)(E) to mean, as a threshold matter, that the part D provisions which are "applicable" and which must be approved in order for EPA to redesignate an area include only those which came due prior to a State's submission of a complete redesignation request. "Procedures for Processing Requests to Redesignate Areas to Attainment," Memorandum from John Calcagni, Director, Air

Quality Management Division, September 4, 1992 (Calcagni memorandum). See also "State Implementation Plan (SIP) Requirements for Areas Submitting Requests for Redesignation to Attainment of the Ozone and Carbon Monoxide (CO) National Ambient Air Quality Standards (NAAQS) on or after November 15, 1992," Memorandum from Michael Shapiro, Acting Assistant Administrator, Air and Radiation, September 17, 1993 (Shapiro memorandum); Final Redesignation of Detroit-Ann Arbor, (60 FR 12459, 12465-66, March 7, 1995); Final Redesignation of St. Louis, Missouri, (68 FR 25418, 25424-27, May 12, 2003); Sierra Club v. EPA, 375 F.3d 537, 541 (7th Cir. 2004) (upholding EPA's redesignation rulemaking applying this interpretation and expressly rejecting Sierra Club's view that the meaning of "applicable" under the statute is "whatever should have been in the plan at the time of attainment rather than whatever actually was in the plan and already implemented or due at the time of attainment"). In this case, at the time that Ohio submitted its redesignation request, requirements under subpart 4 were not due, and indeed, were not yet known to apply.

¹ Applicable requirements of the CAA that come due subsequent to the area's submittal of a complete redesignation request remain applicable until a redesignation is approved, but are not required as a prerequisite to redesignation. Section 175A(c) of the CAA.

EPA's view that, for purposes of evaluating the Dayton redesignation, the subpart 4 requirements were not due at the time the state submitted the redesignation request is in keeping with the EPA's interpretation of subpart 2 requirements for subpart 1 ozone areas redesignated subsequent to the D.C. Circuit's decision in South Coast Air Quality Mgmt. Dist. v. EPA, 472 F.3d 882 (D.C. Cir. 2006). In South Coast, the Court found that EPA was not permitted to implement the 1997 8-hour ozone standard solely under subpart 1, and held that EPA was required under the statute to implement the standard under the ozone-specific requirements of subpart 2 as well. Subsequent to the South Coast decision, in evaluating and acting upon redesignation requests for the 1997 8-hour ozone standard that were submitted to EPA for areas under subpart 1, EPA applied its longstanding interpretation of the CAA that "applicable requirements", for purposes of evaluating a redesignation, are those that had been due at the time the redesignation request was submitted. See, e.g., Proposed Redesignation of Manitowoc County and Door County Nonattainment Areas (75 FR 22047, 22050, April 27, 2010). In those actions, EPA therefore did not consider subpart 2 requirements to be "applicable" for the purposes of evaluating whether the area should be redesignated under section 107(d)(3)(E).

EPA's interpretation derives from the provisions of CAA section 107(d)(3). Section 107(d)(3)(E)(v) states that, for an area to be redesignated, a state must meet "all requirements 'applicable' to the area under section 110 and part D." Section 107(d)(3)(E)(ii) provides that the EPA must have fully approved the "applicable" SIP for the area seeking redesignation. two sections read together support EPA's interpretation of "applicable" as only those requirements that came due prior to submission of a complete redesignation request. First, holding states to an ongoing obligation to adopt new CAA requirements that arose after the state submitted its redesignation request, in order to be redesignated, would make it problematic or impossible for EPA to act on redesignation requests in accordance with the 18-month deadline Congress set for EPA action in section 107(d)(3)(D). If "applicable requirements" were interpreted to be a continuing flow of requirements with no reasonable limitation, states, after submitting a redesignation request, would be forced continuously to make additional SIP submissions that in turn would require EPA to undertake further notice-and-comment rulemaking actions to act on those submissions. This would create a regime of unceasing rulemaking that would delay action on the redesignation request beyond the 18-month timeframe provided by the CAA for this purpose.

Second, a fundamental premise for redesignating a nonattainment area to attainment is that the area has attained the relevant NAAQS due to emission reductions from existing controls. Thus, an area for which a redesignation request has been submitted would have already attained the NAAQS as a result of satisfying statutory requirements that came due prior to the submission of the request. Absent a showing that unadopted and unimplemented requirements are necessary for future maintenance, it is reasonable to view the requirements applicable for purposes of evaluating the redesignation request as including only those SIP requirements that have already come due. are the requirements that led to attainment of the NAAOS. require, for redesignation approval, that a state also satisfy additional SIP requirements coming due after the state submits its complete redesignation request, and while EPA is reviewing it, would compel the state to do more than is necessary to attain the NAAQS, without a showing that the additional requirements are necessary for maintenance.

In the context of this redesignation, the timing and nature of the Court's January 4, 2013, decision in $NRDC\ v$. EPA compound the consequences of imposing requirements that come due after the redesignation request is submitted. The state submitted its redesignation request on June 1, 2011, but the Court did not issue its decision remanding EPA's 1997 $PM_{2.5}$ implementation rule

concerning the applicability of the provisions of subpart 4 until January 2013.

To require the state's fully-completed and pending redesignation request to comply now with requirements of subpart 4 that the Court announced only in January, 2013, would be to give retroactive effect to such requirements when the state had no notice that it was required to meet them. The D.C. Circuit recognized the inequity of this type of retroactive impact in Sierra Club v. Whitman, 285 F.3d 63 (D.C. Cir. 2002), where it upheld the District Court's ruling refusing to make retroactive EPA's determination that the St. Louis area did not meet its attainment deadline. In that case, petitioners urged the Court to make EPA's nonattainment determination effective as of the date that the statute required, rather than the later date on which EPA actually made the determination. The Court rejected this view, stating that applying it "would likely impose large costs on states, which would face fines and suits for not implementing air pollution prevention plans... even though they were not on notice at the time." Id. at 68. Similarly, it would be unreasonable to penalize Ohio by rejecting its

²Sierra Club v. Whitman was discussed and distinguished in a recent D.C. Circuit decision that addressed retroactivity in a quite different context, where, unlike the situation here, EPA sought to give its regulations retroactive effect. National Petrochemical and Refiners Ass'n v. EPA. 630 F.3d 145, 163 (D.C. Cir. 2010), rehearing denied 643 F.3d 958 (D.C. Cir. 2011), cert denied 132 S. Ct. 571 (2011).

redesignation request for an area that is already attaining the $1997 \ PM_{2.5}$ standard and that met all applicable requirements known to be in effect at the time of the request. For EPA now to reject the redesignation request solely because the state did not expressly address subpart 4 requirements of which it had no notice, would inflict the same unfairness condemned by the Court in Sierra Club v. Whitman.

ii. Subpart 4 Requirements and Ohio's Redesignation Request

Even if EPA were to take the view that the Court's

January 4, 2013, decision requires that, in the context of

pending redesignations, subpart 4 requirements were due and in

effect at the time the State submitted its redesignation

request, EPA proposes to determine that the Dayton area still

qualifies for redesignation to attainment. As explained below,

EPA believes that the redesignation request for the Dayton area,

though not expressed in terms of subpart 4 requirements,

substantively meets the requirements of that subpart for

purposes of redesignating the area to attainment.

With respect to evaluating the relevant substantive requirements of subpart 4 for purposes of redesignating the Dayton area, EPA notes that subpart 4 incorporates components of subpart 1 of part D, which contains general air quality planning requirements for areas designated as nonattainment. See Section

172(c). Subpart 4 itself contains specific planning and scheduling requirements for PM_{10}^3 nonattainment areas, and under the Court's January 4, 2013, decision in NRDC v. EPA, these same statutory requirements also apply for $PM_{2.5}$ nonattainment areas. EPA has longstanding general guidance that interprets the 1990 amendments to the CAA, making recommendations to states for meeting the statutory requirements for SIPs for nonattainment areas. See, "State Implementation Plans; General Preamble for the Implementation of Title I of the Clear Air Act Amendments of 1990," 57 FR 13498 (April 16, 1992) (the "General Preamble"). In the General Preamble, EPA discussed the relationship of subpart 1 and subpart 4 SIP requirements, and pointed out that subpart 1 requirements were to an extent "subsumed by, or integrally related to, the more specific PM-10 requirements." 57 FR 13538 (April 16, 1992). The subpart 1 requirements include, among other things, provisions for attainment demonstrations, RACM, RFP, emissions inventories, and contingency measures.

For the purposes of this redesignation, in order to identify any additional requirements which would apply under subpart 4, we are considering the Dayton area to be a "moderate" $PM_{2.5}$ nonattainment area. Under section 188 of the CAA, all

 $^{^{3}}$ PM $_{10}$ refers to particulates nominally 10 micrometers in diameter or smaller.

areas designated nonattainment areas under subpart 4 would initially be classified by operation of law as "moderate" nonattainment areas, and would remain moderate nonattainment areas unless and until EPA reclassifies the area as a "serious" nonattainment area. Accordingly, EPA believes that it is appropriate to limit the evaluation of the potential impact of subpart 4 requirements to those that would be applicable to moderate nonattainment areas. Sections 189(a) and (c) of subpart 4 apply to moderate nonattainment areas and include the following: (1) an approved permit program for construction of new and modified major stationary sources (section 189(a)(1)(A)); (2) an attainment demonstration (section 189(a)(1)(B)); (3) provisions for RACM (section 189(a)(1)(C)); and (4) quantitative milestones demonstrating RFP toward attainment by the applicable attainment date (section 189(c)).

The permit requirements of subpart 4, as contained in section 189(a)(1)(A), refer to and apply the subpart 1 permit provisions requirements of sections 172 and 173 to PM_{10} , without adding to them. Consequently, EPA believes that section 189(a)(1)(A) does not itself impose for redesignation purposes any additional requirements for moderate areas beyond those contained in subpart 1.4 In any event, in the context of

⁴ The potential effect of section 189(e) on section 189(a)(1)(A) for purposes of evaluating this redesignation is discussed

redesignation, EPA has long relied on the interpretation that a fully approved nonattainment NSR program is not considered an applicable requirement for redesignation, provided the area can maintain the standard with a PSD program after redesignation. A detailed rationale for this view is described in the October 14, 1994, Nichols memorandum. See also rulemakings for Detroit, Michigan (60 FR 12467-12468, March 7, 1995); Cleveland-Akron-Lorain, Ohio (61 FR 20458, 20469-20470, May 7, 1996); Louisville, Kentucky (66 FR 53665, October 23, 2001); and Grand Rapids, Michigan (61 FR 31834-31837, June 21, 1996).

With respect to the specific attainment planning requirements under subpart $4,^5$ when EPA evaluates a redesignation request under either subpart 1 and/or 4, any area that is attaining the $PM_{2.5}$ standard is viewed as having satisfied the attainment planning requirements for these subparts. For redesignations, EPA has for many years interpreted attainment-linked requirements as not applicable for areas attaining the standard. In the General Preamble, EPA stated that:

The requirements for RFP will not apply in evaluating a request for redesignation to attainment since, at a minimum, the air quality data for the area must show that the area has already attained. Showing that the

below.

⁵I.e., attainment demonstration, RFP, RACM, milestone requirements, contingency measures.

State will make RFP towards attainment will, therefore, have no meaning at that point.

"General Preamble for the Interpretation of Title I of the Clean Air Act Amendments of 1990"; (57 FR 13498, 13564, April 16, 1992).

The General Preamble also explained that

[t]he section 172(c)(9) requirements are directed at ensuring RFP and attainment by the applicable date.

These requirements no longer apply when an area has attained the standard and is eligible for redesignation. Furthermore, section 175A for maintenance plans... provides specific requirements for contingency measures that effectively supersede the requirements of section 172(c)(9) for these areas.

Id.

EPA similarly stated in its 1992 Calcagni memorandum that,

"The requirements for reasonable further progress and other

measures needed for attainment will not apply for redesignations

because they only have meaning for areas not attaining the

standard."

It is evident that even if we were to consider the Court's January 4, 2013, decision in $NRDC\ v.\ EPA$ to mean that attainment-related requirements specific to subpart 4 should be

imposed retroactively⁶ and thus are now past due, those requirements do not apply to an area that is attaining the 1997 PM_{2.5} standard, for the purpose of evaluating a pending request to redesignate the area to attainment. EPA has consistently enunciated this interpretation of applicable requirements under section 107(d)(3)(E) since the General Preamble was published more than twenty years ago. Courts have recognized the scope of EPA's authority to interpret "applicable requirements" in the redesignation context. See Sierra Club v. EPA, 375 F.3d 537 (7th Cir. 2004).

Moreover, even outside the context of redesignations, EPA has viewed the obligations to submit attainment-related SIP planning requirements of subpart 4 as inapplicable for areas that EPA determines are attaining the standard. EPA's prior "Clean Data Policy" rulemakings for the PM10 NAAQS, also governed by the requirements of subpart 4, explain EPA's reasoning. They describe the effects of a determination of attainment on the attainment-related SIP planning requirements of subpart 4. See "Determination of Attainment for Coso Junction Nonattainment Area," (75 FR 27944, May 19, 2010). See also Coso Junction proposed PM10 redesignation, (75 FR 36023, 36027, June 24, 2010);

⁶ As EPA has explained above, we do not believe that the Court's January 4, 2013 decision should be interpreted so as to impose these requirements on the states retroactively. Sierra Club v. Whitman, supra.

Proposed and Final Determinations of Attainment for San Joaquin Nonattainment Area (71 FR 40952, 40954-55, July 19, 2006; and 71 FR 63641, 63643-47 October 30, 2006). In short, EPA in this context has also long concluded that to require states to meet superfluous SIP planning requirements is not necessary and not required by the CAA, so long as those areas continue to attain the relevant NAAQS.

EPA proposes to determine that the area has attained the $1997 \, PM_{2.5}$ standard. Under its longstanding interpretation, EPA is proposing to determine here that the area meets the attainment-related plan requirements of subparts 1 and 4.

Thus, EPA is proposing to conclude that the requirements to submit an attainment demonstration under 189(a)(1)(B), a RACM determination under section 172(c)d section 189(a)(1)(c), a RFP demonstration under 189(c)(1), and contingency measure requirements under section 172(c)(9) are satisfied for purposes of evaluating the redesignation request.

iii. Subpart 4 and Control of PM2.5 Precursors

The D.C. Circuit in NRDC v. EPA remanded to EPA the two rules at issue in the case with instructions to EPA to repromulgate them consistent with the requirements of subpart 4. EPA in this section addresses the Court's opinion with respect to $PM_{2.5}$ precursors. While past implementation of subpart 4 for PM_{10} has allowed for control of PM_{10} precursors such as NO_X from

major stationary, mobile, and area sources in order to attain the standard as expeditiously as practicable, CAA section 189(e) specifically provides that control requirements for major stationary sources of direct PM_{10} shall also apply to PM_{10} precursors from those sources, except where EPA determines that major stationary sources of such precursors "do not contribute significantly to PM_{10} levels which exceed the standard in the area."

EPA's 1997 PM_{2.5} implementation rule, remanded by the D.C. Circuit, contained rebuttable presumptions concerning certain PM_{2.5} precursors applicable to attainment plans and control measures related to those plans. Specifically, in 40 CFR 51.1002, EPA provided, among other things, that a state was "not required to address VOC [and ammonia] as ... PM_{2.5} attainment plan precursor[s] and to evaluate sources of VOC [and ammonia] emissions in the State for control measures." EPA intended these to be rebuttable presumptions. EPA established these presumptions at the time because of uncertainties regarding the emission inventories for these pollutants and the effectiveness of specific control measures in various regions of the country in reducing PM_{2.5} concentrations. EPA also left open the possibility for such regulation of VOC and ammonia in specific areas where that was necessary.

The Court in its January 4, 2013, decision made reference to both section 189(e) and 40 CFR 51.1002, and stated that, "In light of our disposition, we need not address the petitioners' challenge to the presumptions in [40 CFR 51.1002] that volatile organic compounds and ammonia are not $PM_{2.5}$ precursors, as subpart 4 expressly governs precursor presumptions." NRDC v. EPA, at 27, n.10.

Elsewhere in the Court's opinion, however, the Court observed:

Ammonia is a precursor to fine particulate matter, making it a precursor to both $PM_{2.5}$ and PM_{10} . For a PM_{10} nonattainment area governed by subpart 4, a precursor is presumptively regulated. See 42 U.S.C. § 7513a(e) [section 189(e)]. *Id.* at 21, n.7.

For a number of reasons, EPA believes that its proposed redesignation of Dayton area is consistent with the Court's decision on this aspect of subpart 4. First, while the Court, citing section 189(e), stated that "for a PM₁₀ area governed by subpart 4, a precursor is 'presumptively regulated,'" the Court expressly declined to decide the specific challenge to EPA's 1997 PM_{2.5} implementation rule provisions regarding ammonia and VOC as precursors. The Court had no occasion to reach whether and how it was substantively necessary to regulate any specific

precursor in a particular $PM_{2.5}$ nonattainment area, and did not address what might be necessary for purposes of acting upon a redesignation request.

However, even if EPA takes the view that the requirements of subpart 4 were deemed applicable at the time the state submitted the redesignation request, and disregards the implementation rule's rebuttable presumptions regarding ammonia and VOC as PM_{2.5} precursors, the regulatory consequence would be to consider the need for regulation of all precursors from any sources in the area to demonstrate attainment and to apply the section 189(e) provisions to major stationary sources of precursors. In the case of the Dayton area, EPA believes that doing so is consistent with proposing redesignation of the area for the 1997 PM_{2.5} standard. The Dayton area has attained the standard without any specific additional controls of VOC and ammonia emissions from any sources in the area.

Precursors in subpart 4 are specifically regulated under the provisions of section 189(e), which requires, with important exceptions, control requirements for major stationary sources of PM_{10} precursors. Under subpart 1 and EPA's prior implementation

⁷ Under either subpart 1 or subpart 4, for purposes of demonstrating attainment as expeditiously as practicable, a state is required to evaluate all economically and technologically feasible control measures for direct PM emissions and precursor emissions, and adopt those measures that are deemed reasonably available.

rule, all major stationary sources of $PM_{2.5}$ precursors were subject to regulation, with the exception of ammonia and VOC. Thus we must address here whether additional controls of ammonia and VOC from major stationary sources are required under section 189(e) of subpart 4 in order to redesignate the area for the 1997 $PM_{2.5}$ standard. As explained below, we do not believe that any additional controls of ammonia and VOC are required in the context of this redesignation.

In the General Preamble, EPA discusses its approach to implementing section 189(e). See 57 FR 13538-13542. With regard to precursor regulation under section 189(e), the General Preamble explicitly stated that control of VOCs under other CAA requirements may suffice to relieve a state from the need to adopt precursor controls under section 189(e). 57 FR 13542. EPA in this proposal proposes to determine that the SIP has met the provisions of section 189(e) with respect to ammonia and VOCs as precursors. This proposed supplemental determination is based on our findings that (1) the Dayton area contains no major stationary sources of ammonia, and (2) existing major stationary sources of VOC are adequately controlled under other provisions of the CAA regulating the ozone NAAQS. In the alternative, EPA

⁸The Dayton area has reduced VOC emissions through the implementation of various control programs including VOC Reasonably Available Control Technology regulations and various on-road and non-road motor vehicle control programs.

proposes to determine that, under the express exception provisions of section 189(e), and in the context of the redesignation of the area, which is attaining the 1997 annual $PM_{2.5}$ standard, at present ammonia and VOC precursors from major stationary sources do not contribute significantly to levels exceeding the 1997 $PM_{2.5}$ standard in the Dayton area. See 57 FR 13539-42.

EPA notes that its 1997 $PM_{2.5}$ implementation rule provisions in 40 CFR 51.1002 were not directed at evaluation of $PM_{2.5}$ precursors in the context of redesignation, but at SIP plans and control measures required to bring a nonattainment area into attainment of the 1997 $PM_{2.5}$ NAAQS. By contrast, redesignation to attainment primarily requires the area to have already attained due to permanent and enforceable emission reductions, and to demonstrate that controls in place can continue to maintain the standard. Thus, even if we regard the Court's January 4, 2013, decision as calling for "presumptive regulation" of ammonia and VOC for PM_{2.5} under the attainment planning provisions of subpart 4, those provisions in and of themselves do not require additional controls of these precursors for an area that already qualifies for redesignation. Nor does EPA believe that requiring Ohio to address precursors differently than they have already would result in a substantively different outcome.

Although, as EPA has emphasized, its consideration here of precursor requirements under subpart 4 is in the context of a redesignation to attainment, EPA's existing interpretation of subpart 4 requirements with respect to precursors in attainment plans for PM_{10} contemplates that states may develop attainment plans that regulate only those precursors that are necessary for purposes of attainment in the area in question, i.e., states may determine that only certain precursors need be regulated for attainment and control purposes. 9 Courts have upheld this approach to the requirements of subpart 4 for PM_{10} . EPA believes that application of this approach to PM2.5 precursors under subpart 4 is reasonable. Because the Dayton area has already attained the 1997 PM2.5 NAAQS with its current approach to regulation of PM2.5 precursors, EPA believes that it is reasonable to conclude in the context of this redesignation that there is no need to revisit the attainment control strategy with respect to the treatment of precursors. Even if the Court's decision is construed to impose an obligation, in evaluating this

 $^{^9}See$, e.g., "Approval and Promulgation of Implementation Plans for California – San Joaquin Valley PM-10 Nonattainment Area; Serious Area Plan for Nonattainment of the 24-Hour and Annual PM-10 Standards," 69 FR 30006 (May 26, 2004) (approving a PM₁₀ attainment plan that impose controls on direct PM₁₀ and NO_X emissions and did not impose controls on SO₂, VOC, or ammonia emissions).

 $^{^{10}}$ See, e.g., Assoc. of Irritated Residents v. EPA et al., 423 F.3d 989 (9th Cir. 2005).

redesignation request, to consider additional precursors under subpart 4, it would not affect EPA's approval here of Ohio's request for redesignation of the Dayton area. In the context of a redesignation, the area has shown that it has attained the standard. Moreover, the state has shown and EPA is proposing that attainment in this area is due to permanent and enforceable emissions reductions on all precursors necessary to provide for continued attainment. It follows logically that no further control of additional precursors is necessary. Accordingly, EPA does not view the January 4, 2013, decision of the Court as precluding redesignation of the Dayton area to attainment for the 1997 PM2.5 NAAQS at this time.

In sum, even if Ohio were required to address precursors for the Dayton area under subpart 4 rather than under subpart 1, as interpreted in EPA's remanded $PM_{2.5}$ implementation rule, EPA would still conclude that the area had met all applicable requirements for purposes of redesignation in accordance with section 107(d)(3(E)(ii)) and (v).

iv. Maintenance Plan and Evaluation of Precursors

A discussion of the impact of the Court's decision on the maintenance plan required under sections 175A and 107(d)(3)(E)(iv) can be found in section IV.A.4.d.

b. The Dayton Area Has a Fully Approved Applicable SIP under Section 110(k) of the CAA

Upon final approval of Ohio's comprehensive 2005 and 2008 emissions inventories, EPA will have fully approved the Ohio SIP for the Dayton area under section 110(k) of the CAA for all requirements applicable for purposes of redesignation. EPA may rely on prior SIP approvals in approving a redesignation request (See page 3 of the Calcagni memorandum; Southwestern Pennsylvania Growth Alliance v. Browner, 144 F.3d 984, 989-990 (6th Cir. 1998); Wall v. EPA, 265 F.3d 426 (6th Cir. 2001)) plus any additional measures it may approve in conjunction with a redesignation action. See 68 FR 25413, 25426 (May 12, 2003). Since the passage of the CAA of 1970, Ohio has adopted and submitted, and EPA has fully approved, provisions addressing various required SIP elements under particulate matter standards. EPA is proposing to approve Ohio's 2005 and 2008 emissions inventories for the Dayton area as meeting the requirement of section 172(c)(3) of the CAA. No Dayton area SIP provisions are currently disapproved, conditionally approved, or partially approved.

3. The Improvement in Air Quality Is Due to Permanent and Enforceable Reductions in Emissions Resulting from
Implementation of the SIP and Applicable Federal Air Pollution
Control Regulations and Other Permanent and Enforceable
Reductions

EPA finds that Ohio has demonstrated that the observed air quality improvement in the Dayton area is due to permanent and enforceable reductions in emissions resulting from implementation of the SIP, Federal measures, and other stateadopted measures.

In making this showing, Ohio EPA has calculated the change in emissions between 2005, one of the years in the period during which the Dayton area monitored nonattainment, and 2008, one of the years in the period during which the Dayton area monitored attainment. The reduction in emissions and the corresponding improvement in air quality over this time period can be attributed to a number of regulatory control measures that the Dayton area and upwind areas have implemented in recent years.

a. Permanent and Enforceable Controls Implemented

The following is a discussion of permanent and enforceable measures that have been implemented in the area:

i. Federal Emission Control Measures

Reductions in fine particle precursor emissions have occurred statewide and in upwind areas as a result of Federal emission control measures, with additional emission reductions expected to occur in the future. Federal emission control measures include the following:

Tier 2 Emission Standards for Vehicles and Gasoline Sulfur Standards. These emission control requirements result in lower

VOC, NO_x, and SO₂ emissions from new cars and light duty trucks, including sport utility vehicles. The Federal rules were phased in between 2004 and 2009. The EPA has estimated that, by the time post-2009 vehicles have entirely replaced pre-2009 vehicles, the following vehicle NO_X emission reductions will have occurred nationwide: passenger cars (light duty vehicles) (77 percent); light duty trucks, minivans, and sports utility vehicles (86 percent); and, larger sports utility vehicles, vans, and heavier trucks (69 to 95 percent). Some of the emissions reductions resulting from new vehicle standards occurred during the 2008-2010 attainment period; however additional reductions will continue to occur throughout the maintenance period as new vehicles replace older vehicles. Tier 2 standards also reduced the sulfur content of gasoline to 30 parts per million (ppm) beginning in January 2006. Gasoline sold in the region including Ohio prior to implementation of the Tier 2 sulfur content limits had an average sulfur content of 276 ppm¹¹.

Heavy-Duty Diesel Engine Rule. This rule, which EPA issued in July 2000, limited the sulfur content of diesel fuel beginning in 2004. A second phase took effect in 2007 which reduced fine

¹¹ See Regulatory Impact Analysis - Control of Air Pollution from New Motor Vehicles: Tier 2 Motor Vehicle Emissions Standards and Gasoline Sulfur Control Requirements, December 1999, EPA420-R-99-023, p. IV-42.

particle emissions from heavy-duty highway engines and further reduced the highway diesel fuel sulfur content to 15 ppm. The total program is estimated to achieve a 90 percent reduction in primary PM_{2.5} emissions and a 95 percent reduction in NO_X emissions for these new engines using low sulfur diesel, compared to existing engines using higher sulfur content diesel. The reductions in fuel sulfur content occurred by the 2008-2010 attainment period. Some of the emissions reductions resulting from new vehicle standards occurred during the 2008-2010 attainment period, however additional reductions will continue to occur throughout the maintenance period as the fleet of older heavy duty diesel engines turns over. The reduction in fuel sulfur content also yielded an immediate reduction in sulfate particle emissions from all diesel vehicles.

Nonroad Diesel Rule. In May 2004, EPA promulgated a new rule for large nonroad diesel engines, such as those used in construction, agriculture, and mining equipment, which established engine emission standards to be phased in between 2008 and 2014. The rule also required reductions to the sulfur content in nonroad diesel fuel by over 99 percent. Prior to 2006, nonroad diesel fuel averaged approximately 3,400 ppm sulfur. This rule limited nonroad diesel sulfur content to 500 ppm by 2006, with a further reduction to 15 ppm, by 2010. The combined engine and fuel rules will reduce NO_X and PM emissions

from large nonroad diesel engines by over 90 percent, compared to current nonroad engines using higher sulfur content diesel. The reduction in fuel sulfur content yielded an immediate reduction in sulfate particle emissions from all diesel vehicles. In addition, some emissions reductions from the new engine emission standards were realized over the 2008-2010 time period, although most of the reductions will occur over the maintenance period as the fleet of older nonroad diesel engines turns over.

Nonroad Large Spark-Ignition Engine and Recreational Engine Standards. In November 2002, EPA promulgated emission standards for groups of previously unregulated nonroad engines. These engines include large spark-ignition engines such as those used in forklifts and airport ground-service equipment; recreational vehicles using spark-ignition engines such as off-highway motorcycles, all-terrain vehicles, and snowmobiles; and recreational marine diesel engines. Emission standards from large spark-ignition engines were implemented in two tiers, with Tier 1 starting in 2004 and Tier 2 in 2007. Recreational vehicle emission standards are being phased in from 2006 through 2012. Marine Diesel engine standards were phased in from 2006 through 2009. With full implementation of all of the nonroad spark-ignition engine and recreational engine standards, an overall 72 percent reduction in VOC, 80 percent reduction in NO_X

and 56 percent reduction in carbon monoxide (CO) emissions are expected by 2020. Some of these emission reductions occurred by the 2008-2010 attainment period and additional emission reductions will occur during the maintenance period as the fleet turns over.

ii. Control Measures implemented in Ohio and in Upwind Areas

Given the significance of sulfates and nitrates in the Dayton area, the area's air quality is strongly affected by regulation of SO_2 and NO_X emissions from power plants.

 NO_X SIP Call. On October 27, 1998 (63 FR 57356), EPA issued a NO_X SIP Call requiring the District of Columbia and 22 states to reduce emissions of NO_X . Affected states were required to comply with Phase I of the SIP Call beginning in 2004, and Phase II beginning in 2007. Emission reductions resulting from regulations developed in response to the NO_X SIP Call are permanent and enforceable.

CAIR and CSAPR. EPA promulgated CSAPR (76 FR 48208, August 8, 2011), to replace CAIR, which has been in place since 2005. See 76 FR 59517. CAIR requires significant reductions in emissions of SO_2 and NO_X from electric generating units to limit the interstate transport of these pollutants and the ozone and fine particulate matter they form in the atmosphere. See 76 FR 70093. The D.C. Circuit initially vacated CAIR, North Carolina

v. EPA, 531 F.3d 896 (D.C. Cir. 2008), but ultimately remanded that rule to EPA without vacatur to preserve the environmental benefits provided by CAIR, North Carolina v. EPA, 550 F.3d 1176, 1178 (D.C. Cir. 2008).

On December 30, 2011, the D.C. Circuit issued an order addressing the status of CSAPR and CAIR in response to motions filed by numerous parties seeking a stay of CSAPR pending judicial review. In that order, the Court stayed CSAPR pending resolution of the petitions for review of that rule in EME Homer City Generation, L.P. v. EPA (No. 11-1302 and consolidated cases). The Court also indicated that EPA was expected to continue to administer CAIR in the interim until judicial review of CSAPR was completed.

As noted above, on August 21, 2012, the D.C. Circuit issued the decision in *EME Homer City* to vacate and remand CSAPR and ordered EPA to continue administering CAIR "pending... development of a valid replacement." *EME Homer City at* 38. The D.C. Circuit denied all petitions for rehearing on January 24, 2013. EPA and other parties have filed petitions for certiorari to the U.S. Supreme Court. On June 24, 2013, the Supreme Court granted certiorari and agreed to review the D.C. Circuit's decision in EME Homer City. The Supreme Court's grant of certiorari, by itself, does not alter the status of CAIR or CSAPR. At this time, CAIR remains in place.

In light of these unique circumstances and for the reasons explained below, to the extent that attainment is due to emission reductions associated with CAIR, EPA is here determining that those reductions are sufficiently permanent and enforceable for purposes of CAA sections 107(d)(3)(E)(iii) and 175A.

As directed by the D.C. Circuit, CAIR remains in place and enforceable until EPA promulgates a valid replacement rule to substitute for CAIR. The Dayton SIP revision lists CAIR as a control measure that was adopted by the State in 2006 and required compliance by January 1, 2009. CAIR was thus in place and getting emission reductions when Dayton monitored attainment of the 1997 annual $PM_{2.5}$ standard during the 2006-2008 time period. The quality-assured, certified monitoring data continues to show the area in attainment of the 1997 $PM_{2.5}$ standard through 2012.

To the extent Ohio is relying on CAIR in its maintenance plan to support continued attainment into the future, the directive from the D.C. Circuit in EME Homer City ensures that the reductions associated with CAIR will be permanent and enforceable for the necessary time period. EPA has been ordered by the Court to develop a new rule to address interstate transport to replace CSAPR, and the opinion makes clear that after promulgating that new rule EPA must provide states an

opportunity to draft and submit SIPs to implement that rule. Thus, CAIR will remain in place until EPA has promulgated a final rule through a notice-and-comment rulemaking process, states have had an opportunity to draft and submit SIPs in response to it, EPA has reviewed the SIPs to determine if they can be approved, and EPA has taken action on the SIPs, including promulgating a FIP if appropriate. The Court's clear instruction to EPA is that it must continue to administer CAIR until a valid replacement exists, and thus EPA believes that CAIR emission reductions may be relied upon until the necessary actions are taken by EPA and states to administer CAIR's replacement. Furthermore, the Court's instruction provides an additional backstop: by definition, any rule that replaces CAIR and meets the Court's direction would require upwind states to have SIPs that eliminate any significant contributions to downwind nonattainment and prevent interference with maintenance in downwind areas.

Further, in vacating CSAPR and requiring EPA to continue administering CAIR, the D.C. Circuit emphasized that the consequences of vacating CAIR "might be more severe now in light of the reliance interests accumulated over the intervening four years." EME Homer City, 696 F.3d at 38. The accumulated reliance interests include the interests of states that reasonably assumed they could rely on reductions associated with

CAIR which brought certain nonattainment areas into attainment with the NAAQS. If EPA were prevented from relying on reductions associated with CAIR in redesignation actions, states would be forced to impose additional, redundant reductions on top of those achieved by CAIR. EPA believes this is precisely the type of irrational result the Court sought to avoid by ordering EPA to continue administering CAIR. For these reasons also, EPA believes it is appropriate to allow states to rely on CAIR, and the existing emissions reductions achieved by CAIR, as sufficiently permanent and enforceable for regulatory purposes such as redesignations. Following promulgation of the replacement rule for CSAPR, EPA will review existing SIPs as appropriate to identify whether there are any issues that need to be addressed.

b. Emission Reductions

Ohio developed emissions inventories for NO_X , primary $PM_{2.5}$, and SO_2 for 2005, a year that the Dayton area monitored nonattainment of the 1997 annual $PM_{2.5}$ standard, and 2008, a year the area monitored attainment of the standard. The emission inventories were developed with the assistance of the Lake Michigan Air Directors Consortium (LADCO). The 2005 nonattainment inventory was developed as described below. Point source emissions for 2005 were compiled by Ohio EPA using source specific data reported by facilities through the State's

STARShip database program. The data are reported by facilities annually and include emissions, process rates, operating schedules, emissions control data and other relevant information. Ohio EPA quality assured the database files and submitted the data to LADCO for emissions processing through the Emissions Modeling System (EMS). LADCO used the EGU inventory compiled by EPA's Acid Rain Program, based on facility reported emissions as measured by continuous emissions monitors.

Area source sector emissions were calculated using surrogate emissions factors based on energy usage, population, employment records, or other reliable data. Ohio EPA used Emission Inventory improvement Program methodologies or selected other methodologies which are shared by other states. The decision of which methodology to use was largely based on Ohio's data availability.

Nonroad source sector emissions estimates were generated using EPA's National Mobile Inventory Model (NMIM), with the following modifications: emission factors were added for diesel tampers/rammers; the PM_{2.5} ratios in the SCC table were revised to correctly calculate PM_{2.5} diesel emissions; and, gasoline parameters, including Reid Vapor Pressure (RVP), Oxygenate content and sulfur content, were revised using updates provided by the state and E.H. Pechan and Associates. Marine, aircraft and rail nonroad emissions were calculated separately.

Contractors were employed by LADCO to estimate emissions for commercial marine vessels and railroads. Ohio developed aircraft emissions estimates using AP-42 emission factors and landing and take-off data provided by the Federal Aviation Administration.

Onroad mobile source emissions estimates were developed using the EPA's MOVES2010 model. The 2008 attainment year inventory was developed as follows. Point source emissions for 2008 were compiled from Ohio's STARShip database. Onroad emissions projections were based on EPA's MOVES2010 model. Area and nonroad emissions were grown from the 2005 inventory using LADCO's growth factors.

The state aggregated the emission inventories to obtain the total emissions for each category and the grand total emissions for the Dayton area. The emission inventories for the Dayton area by pollutant are presented in Tables 2 to 4. The data in Table 2 indicates $PM_{2.5}$ emission decreased by 170 tons per year (tpy) between 2005 and 2008. Similarly, the Table 3 data indicates a 7,022 tpy reduction in NO_x emissions and Table 4 shows a 1,415 tpy decrease in SO_2 emission from 2005 to 2008.

4. The Area Has a Fully Approved Maintenance Plan Pursuant to Section 175A of the CAA.

In conjunction with Ohio's requests to redesignate the Dayton nonattainment area to attainment status, Ohio EPA

submitted SIP revisions to provide for maintenance of the 1997 annual $PM_{2.5}$ NAAQS in the area through 2022.

a. What Is Required in a Maintenance Plan?

Section 175A of the CAA sets forth the required elements of a maintenance plan for areas seeking redesignation from nonattainment to attainment. Under section 175A, the plan must demonstrate continued attainment of the applicable NAAQS for at least ten years after EPA approves a redesignation to attainment. Eight years after redesignation, the state must submit a revised maintenance plan which demonstrates that attainment will continue to be maintained for ten years following the initial ten year maintenance period. To address the possibility of future NAAQS violations, the maintenance plan must contain contingency measures with a schedule for implementation as EPA deems necessary to assure prompt correction of any future PM2.5 violations.

The September 4, 1992, John Calcagni memorandum provides additional guidance on the content of a maintenance plan. The memorandum states that a maintenance plan should address the following items: the attainment emissions inventories, a maintenance demonstration showing maintenance for the ten years of the maintenance period, a commitment to maintain the existing monitoring network, factors and procedures to be used for verification of continued attainment of the NAAQS, and a

contingency plan to prevent or correct future violations of the NAAQS.

b. Attainment Inventory

Ohio developed emissions inventories for NO_X , $PM_{2.5}$, and SO_2 for 2008, a year the area monitored attainment of the 1997 annual $PM_{2.5}$ standard, as described in section IV.A.3.b. The attainment level of emissions is summarized in Tables 2 to 4.

Demonstration of Maintenance

Along with the redesignation requests, Ohio EPA submitted revisions to the Ohio PM_{2,5} SIP to include maintenance plans for the Dayton area, as required by section 175A of the CAA.

Section 175A requires a state seeking redesignation to attainment to submit a SIP revision to provide for the maintenance of the NAAQS in the area "for at least 10 years after the redesignation." EPA has interpreted this as a showing of maintenance "for a period of ten years following redesignation" in the Calcagni Memorandum, p. 9. Where the emissions inventory method of showing maintenance is used, its purpose is to show that emissions during the maintenance period will not increase over the attainment year inventory. Calcagni Memorandum, pp. 9-10.

Ohio's maintenance plan submissions expressly document that the Dayton area's emissions inventories will remain below the attainment year inventories through 2022. In addition, for the reasons set forth below, EPA believes that Ohio's submission, in conjunction with additional supporting information, further demonstrating that the area will continue to maintain the $PM_{2.5}$ standard at least through 2023. Thus, if EPA finalizes its proposed approval of the redesignation requests and maintenance plans in 2013, it will be based on a showing, in accordance with section 175A, that Ohio's maintenance plans provide for maintenance for at least ten years after redesignation.

Ohio's plans demonstrate maintenance of the PM_{2.5} NAAQS through 2022 by showing that current and future emissions of NO_X, PM_{2.5}, and SO₂ for the Dayton area remain at or below attainment year emission levels. A maintenance demonstration need not be based on modeling. See Wall v. EPA, 265 F.3d 426 (6th Cir. 2001), Sierra Club v. EPA, 375 F. 3d 537 (7th Cir. 2004). See also 66 FR 53094, 53099-53100 (October 19, 2001), 68 FR 25413, 25430-25432 (May 12, 2003). As discussed below, a comparison of current and future VOC and ammonia emissions show ammonia emissions are expected to remain relatively constant. In contrast, VOC emissions are projected to decline significantly. The VOC and ammonia emission projections further support a finding that the Dayton area will continue to maintain the standard.

Ohio is using $PM_{2.5}$, NO_x , and SO_2 emissions inventory projections for the years 2015 and 2022 to demonstrate

maintenance. The projected emissions were estimated by Ohio with assistance from LADCO.

LADCO has developed growth and control files for point, area, and nonroad categories. These files were used along with LADCO's 2009 and 2018 emission inventories to develop the 2015 and 2022 emissions estimates. Onroad emissions projections were made by using the MOVES model.

As discussed in section IV.3.a., many of the control programs that helped to bring the area into attainment of the standard will continue to achieve additional emission reductions over the maintenance period. These control programs include Tier 2 emission standards for vehicles and gasoline sulfur standards, the heavy-duty diesel engine rule, the nonroad diesel rule, and the nonroad large spark-ignition engine and recreation engine standards. In addition, implementation of CAIR was assumed in the projections. The state then aggregated the emission inventories to obtain the total emissions for each category and the grand total emissions for the Dayton area. The emission inventories for the Dayton area by pollutant are presented in Tables 2 to 4.

Table 2: Comparison of 2005, 2008, 2015, and 2022 Direct $PM_{2.5}$ Emission Totals by County (tpy) for the Dayton Area

	Direct PM _{2.5}						
					Net		
	2005	2008		2022	Change		
County	Base	Attainment	2015	Maintenance	2008-2022		

Clark	377.44	340.97	248.54	198.10	-142.87
Greene	491.15	458.91	372.82	336.44	-122.47
Montgomery	1,516.57	1,415.40	1,115.14	968.50	-446.90
Total	2,385	2,215	1,737	1,503	-712

Table 3: Comparison of 2005, 2008, 2015, and 2022 $NO_{\rm x}$ Emission Totals by County (tpy) for the Dayton Area

	NO_X						
County	2005 Base	2008 Attainment	2015	2022 Maintenance	Net Change 2008-2022		
Clark	7,327.18	6,159.66	3,630.30	2,080.20	-4,079.46		
Greene	9,448.97	8,459.44	6,140.94	5,014.57	-3,444.87		
Montgomery	27,364.92	22,499.86	14,004.55	8,762.54	-13,737.3		
Total	44,141	37,119	23,776	15,857	-21,262		

Table 4: Comparison of 2005, 2008, 2015, and 2022 SO_2 Emission Totals by County (tpy) for the Dayton Area

	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4						
	SO_2						
County	2005 Base	2008 Attainment	2015	2022 Maintenance	Net Change 2008-2022		
Clark	278.81	168.87	121.64	109.97	-58.90		
Greene	2,344.19	2,278.89	2,352.21	2,397.31	+118.42		
Montgomery	8,653.40	7,413.46	7,360.15	7,053.08	-360.38		
Total	11,276	9,861	9,834	9,560	-301		

The 2015 and 2022 emission inventories indicate that the emission reductions are expected to continue. A 712 tpy, or 32 percent, reduction in $PM_{2.5}$ emissions between 2008 and 2022 is expected. The 21,262 tpy NO_x emission decrease is a 57 percent reduction, while the 301 tpy SO_2 decrease equates to a 3 percent reduction, again between 2008 and 2022. These rates of decline are consistent with monitored and projected air quality trends, emissions reductions achieved through emissions controls and regulations that will remain in place beyond 2023. Furthermore,

fleet turnover in onroad and nonroad vehicles that will continue to occur after 2022 will continue to provide additional significant emission reductions.

In addition, available air quality modeling analyses show continued maintenance of the standard during the maintenance period. The current air quality design value for the Dayton area is 12.3 $\mu g/m^3$ based on 2010 to 2012 air quality data, which is well below the 1997 annual $PM_{2.5}$ NAAQS of 15 $\mu g/m^3$. Moreover, the modeling analysis conducted for EPA's regulatory impact analysis (RIA) for the 2012 $PM_{2.5}$ NAAQS indicates that the design value for this area is expected to continue through 2020. In the RIA analysis, the 2020 modeled design value for the Dayton area is 9.5 $\mu g/m^3$. Given that precursor emissions are projected to decrease through 2022, it is reasonable to conclude that monitored $PM_{2.5}$ levels in this area will also continue to decrease through 2022.

Based on the information summarized above, Ohio has adequately demonstrated maintenance of the $PM_{2.5}$ standard for a period extending ten years from the date that EPA may be expected to complete rulemaking on the State's redesignation request.

d. Maintenance Plan and Evaluation of Precursors

After evaluating the effect of the Court's remand of EPA's implementation rule, a rule that included presumptions against

consideration of VOC and ammonia as $PM_{2.5}$ precursors, EPA in this proposal is also considering the impact of the decision on the maintenance plan required under sections 175A and 107(d)(3)(E)(iv). To begin with, EPA notes that the area has attained the 1997 $PM_{2.5}$ standard and that the state has shown that attainment of that standard is due to permanent and enforceable emission reductions.

Based on its review of Ohio's maintenance plan and related information, EPA believes that the primary influences on future air quality in the Dayton area will be emissions of NO_x , directly emitted $PM_{2.5}$, and SO_2 . EPA therefore proposes to determine that Ohio's maintenance plan shows continued maintenance of the standard by tracking the levels of the precursors whose control brought about attainment of the 1997 $PM_{2.5}$ standard in the Dayton area. Nevertheless, pursuant to the Court's January 4, 2013, decision, EPA is further assessing the potential role of VOC and ammonia in achieving continued maintenance in this area. As explained below, based upon documentation provided by the State and supporting information, EPA believes that the prospective trends in emissions of VOC and ammonia are consistent with a finding of continued maintenance of the standard in the Dayton area.

First, as noted above in EPA's discussion of section 189(e), VOC emission levels in this area have historically been

well controlled under SIP requirements related to ozone and other pollutants. Second, total ammonia emissions throughout the Dayton area are modest, estimated to be about 27,250 tpy. See Table 5. Third, as described below, available information shows that no precursor, including VOC and ammonia, is expected to increase over the maintenance period so as to interfere with or undermine the Ohio's maintenance demonstration.

Ohio's maintenance plan shows that emissions of direct $PM_{2.5}$, SO_2 , and NO_X are projected to decrease by 712 tpy, 301 tpy, and 21,262 tpy, respectively, over the maintenance period. Tables 2 to 4. In addition, emissions inventories used in the RIA for the 2012 PM_{2.5} NAAQS show that VOC and ammonia emissions are projected to decrease by 124 tpy and 8,778 tpy, respectively between 2007 and 2020 as shown on Table 5. While the RIA emissions inventories are only projected out to 2020, there is no reason to believe that this downward trend would not continue through 2023. Given that the Dayton area is already attaining the 1997 PM_{2.5} NAAQS even with the current level of emissions from sources in the area, the downward trend of emissions inventories would be consistent with continued attainment. Indeed, projected emissions reductions for the precursors that Ohio is addressing for purposes of the 1997 $PM_{2.5}$ NAAQS indicate that the area should continue to attain the NAAQS following the control strategy that the state has already elected to pursue.

Even if VOC and ammonia emissions were to increase unexpectedly between 2020 and 2022, the overall emissions reductions projected in direct $PM_{2.5}$, SO_2 , and NO_X would be sufficient to offset any increases. For these reasons, EPA believes that local emissions of all of the potential $PM_{2.5}$ precursors will not increase to the extent that they will cause monitored $PM_{2.5}$ levels to violate the 1997 $PM_{2.5}$ standard during the maintenance period.

Table 5: Comparison of 2007 and 2020 VOC and Ammonia Emission Totals by County (tpy) for the Dayton Area¹²

results by country (cp), for one buyeon incu							
	Ammonia			VOC			
County	2007	2020	Net Change 2007-2020	2007	2020	Net Change 2007-2020	
Clark	808	793	-15	4,771	3,142	-1,629	
Greene	537	525	-13	4,052	2,749	-1,303	
Montgomery	748	651	-96	18,421	12,574	-5,846	
Total	2,093	1,969	-124	27,244	18,465	-8,778	

Thus, EPA believes that there is ample justification to conclude that the Dayton area should be redesignated, even taking into consideration the emissions of other precursors potentially relevant to $PM_{2.5}$. After consideration of the D.C. Circuit's January 4, 2013, decision, and for the reasons set forth in this notice, EPA proposes to approve Ohio's maintenance plan.

¹² These emissions estimates were taken from the emissions inventories developed for the RIA for the 2012 $PM_{2.5}$ NAAQS. Values were rounded on the table following making the calculations.

e. Monitoring Network

Ohio currently operates three monitors for purposes of determining attainment with the $PM_{2.5}$ standards in the Dayton area. Ohio EPA has committed to continue to operate and maintain these monitors and will consult with EPA prior to making any changes to the existing monitoring network. Ohio EPA remains obligated to continue to quality assure monitoring data in accordance with 40 CFR part 58 and enter all data into the AQS in accordance with Federal guidelines.

f. Verification of Continued Attainment

Continued attainment of the $PM_{2.5}$ NAAQS in the Dayton area depends, in part, on Ohio's efforts toward tracking indicators of continued attainment during the maintenance period. Ohio's plans for verifying continued attainment of the 1997 annual $PM_{2.5}$ standard in the Dayton area consists of continued ambient $PM_{2.5}$ monitoring in accordance with the requirements of 40 CFR part 58. Ohio will also continue to develop and submit periodic emission inventories as required by the Federal Consolidated Emissions Reporting Rule (codified at 40 CFR 51 subpart A) to track future levels of emissions.

g. Contingency Plan

The contingency plan provisions are designed to promptly correct or prevent a violation of the NAAQS that might occur after redesignation of an area to attainment. Section 175A of

the CAA requires that a maintenance plan include such contingency measures as EPA deems necessary to ensure that the state will promptly correct a violation of the NAAQS that occurs after redesignation. The maintenance plan should identify the contingency measures to be adopted, a schedule and procedure for adoption and implementation of the contingency measures, and a time limit for action by the state. The state should also identify specific indicators to be used to determine when the contingency measures need to be adopted and implemented. The maintenance plan must include a requirement that the state will implement all measures with respect to control of the pollutant(s) that were contained in the SIP before redesignation of the area to attainment. See section 175A(d) of the CAA.

As required by section 175A of the CAA, Ohio has adopted contingency plans for the Dayton area to address possible future $PM_{2.5}$ air quality problems. Contingency provisions are measures that can be implemented to prevent or promptly correct a violation of the standard. The state set a "warning level" for when an annual mean of 15.5 μ g/m³ or greater occurs. This level requires analyzing the ambient concentration trend within 12 months of the warning level triggering calendar year's end.

If the annual value trend is rising, control measures to reverse the rising trend are implemented. An "action level" response is triggered whenever the two year average is 15.0 $\mu g/m^3$

or greater and whenever a violation occurs. This level response requires the state, along with the Regional Air Pollution

Control Agency, to determine the additional control measures to assure future attainment. The controls measures are to be in place within 18 months from the end of the calendar year prompting the action level.

Ohio provided a list of potential contingency provisions in its maintenance plan. It listed diesel emission reductions, alternative fuels, fleet diesel retrofit programs, tighter $PM_{2.5}$, SO_2 , and NO_x emission offsets for new and modified major sources, upgraded wet suppression at scrap yards and at concrete manufacturing facilities, and additional NO_x RACT measures. Other controls measures may also be implemented. If necessary, ohio will select control measures to ensure the ambient $PM_{2.5}$ concentrations remain in attainment with the standard.

h. Provisions for Future Updates of the Annual $PM_{2.5}$ Maintenance Plan

As required by section 175A(b) of the CAA, Ohio commits to submit to EPA updated maintenance plans eight years after redesignation of the Dayton area to attainment of the 1997 annual $PM_{2.5}$ standard to cover an additional ten year period beyond the initial ten year maintenance period. As required by section 175A of the CAA, Ohio has committed to retain the control measures contained in the SIP prior to redesignation,

and to submit to EPA for approval as a SIP revision, any changes to its rules or emission limits applicable to SO_2 , NO_X , or direct $PM_{2.5}$ sources as required for maintenance of the 1997 annual $PM_{2.5}$ standard in the Dayton area.

EPA has concluded that the maintenance plan adequately addresses the five basic components of a maintenance plan: attainment inventory, maintenance demonstration, monitoring network, verification of continued attainment, and a contingency plan.

B. Comprehensive Emissions Inventories

Section 173(c)(3) of the CAA requires areas to submit a comprehensive, accurate and current emissions inventory. As part of the redesignation request, Ohio submitted 2005 and 2008 emissions inventories for NO_X , primary $PM_{2.5}$, and SO_2 on June 1, 2011. These emission inventories are discussed in section IV.A.4.c. and the data are shown in Tables 2 to 4.

On April 30, 2013, Ohio supplemented its emissions inventory information for direct $PM_{2.5}$, NO_X , and SO_2 with 2007/2008 emissions inventories for ammonia and VOC. The additional emissions inventory information provided by Ohio addresses emissions of VOC and ammonia from the general source categories of point sources, area sources, onroad mobile sources, and nonroad mobile sources. The emissions inventories

were based upon information generated by LADCO in conjunction with its member states.

As with its inventories for NO_x , directly emitted $PM_{2.5}$, and SO_2 , Ohio's inventories for point source emissions of VOC and ammonia were based largely on LADCO runs with the EMS model using data provided by the State of Ohio. The point source data supplied by the State was obtained from facility emissions reporting.

For area sources inventories for VOC and ammonia, again as with the inventories for NO_x, PM_{2.5}, and SO₂, LADCO ran the EMS model using the 2008 National Emissions Inventory (NEI) data provided by Ohio. LADCO followed Eastern Regional Technical Advisory Committee (ERTAC) recommendations on area sources when preparing the data. Agricultural ammonia emissions were not taken from NEI; instead emissions were based on Carnegie Mellon University's Ammonia Emission Inventory for the Continental United States (CMU). Specifically, the CMU 2002 annual emissions were grown to reflect 2007 conditions. A process-based ammonia emissions model developed for LADCO was then used to develop temporal factors to reflect the impact of average meteorology on livestock emissions.

Non-road mobile source emissions of VOC and ammonia, similar to the other pollutants, were estimated using the NMIM2008 emissions model. LADCO also accounted for three other

non-road categories not covered by the NMIM model: commercial marine vessels, aircraft, and railroads. Marine emissions were based on reports prepared by Environ entitled "LADCO Nonroad Emissions Inventory Project for Locomotive, Commercial Marine, and Recreational Marine Emission Sources, Final Report, December 2004" and "LADCO 2005 Commercial Marine Emissions, Draft, March, 2, 2007." Aircraft emissions were provided by Ohio and calculated using AP-42 emission factors and landing and take-off data provided by the Federal Aviation Administration. Rail emissions were based on the 2008 inventory developed by ERTAC. On-road mobile source emissions were generated using EPA's

EPA notes that the emissions inventory developed by LADCO is documented in "Regional Air Quality Analyses for Ozone, PM_{2.5}, and Regional Haze: Base C Emissions Inventory" (September 12, 2011). EPA has concluded that the 2007/2008 ammonia and VOC emissions inventories provided by Ohio are complete and as accurate as possible given the input data available for the relevant source categories. Ohio submitted an 2007/2008 ammonia inventory of 2,286 tpy and a 25,881 tpy VOC 2007/2008 inventory¹³. EPA also believes that these inventories provide information about VOC and ammonia as PM_{2.5} precursors in the

¹³ These ammonia and VOC emissions inventories vary from the inventories presented on Table 5 in section IV.A.4.d. because cover different time periods, only 2007 versus 2007 and 2008.

context of evaluating redesignation of the Dayton area under subpart 4.

Therefore, we are proposing to approve the ammonia and VOC emissions inventories submitted by Ohio in April 2013, in conjunction with the NO_X , direct $PM_{2.5}$, and SO_2 emissions inventories submitted in June 2011, as fully meeting the comprehensive inventory requirement of section 172(c)(3) of the CAA for the Dayton area for the 1997 annual $PM_{2.5}$ standard.

C. Motor Vehicle Emission Budgets (MVEBs)

1. How Are MVEBs Developed?

Under the CAA, states are required to submit, at various times, control strategy SIP revisions and maintenance plans for nonattainment areas and for areas seeking redesignation to attainment for a given NAAQS. These emission control strategy SIP revisions (e.g., RFP and attainment demonstration SIP revisions) and maintenance plans create MVEBs based on onroad mobile source emissions for the relevant criteria pollutants and/or their precursors, where appropriate, to address pollution from onroad transportation sources. The MVEBs are the portions of the total allowable emissions that are allocated to onroad vehicle use that, together with emissions from all other sources in the area, will provide for attainment, RFP, or maintenance, as applicable. The budget serves as a ceiling on emissions from an area's planned transportation system. Under 40 CFR part 93,

a MVEB for an area seeking a redesignation to attainment is established for the last year of the maintenance plan. See the September 27, 2011, notice of direct final approval for a more complete discussion of MVEBs. (76 FR 59512).

Under section 176(c) of the CAA, transportation plans and transportation improvement programs (TIPs) must be evaluated to determine if they conform with the area's SIP. Conformity to the SIP means that transportation activities will not cause new air quality violations, worsen existing air quality violations, or delay timely attainment of the NAAQS or any required interim milestone. If a transportation plan or TIP does not conform, most new transportation projects that would expand the capacity of roadways cannot go forward. Regulations at 40 CFR part 93 set forth EPA policy, criteria, and procedures for demonstrating and assuring conformity of such transportation activities to a SIP.

When reviewing SIP revisions containing MVEBs, including attainment strategies, rate-of-progress plans, and maintenance plans, EPA must affirmatively find "adequate" or approve for use in determining transportation conformity before the MVEBs can be used. Once EPA affirmatively approves or finds the submitted MVEBs to be adequate for transportation conformity purposes, the MVEBs must be used by state and Federal agencies in determining whether transportation plans and TIPs conform to the SIP as

required by section 176(c) of the CAA. EPA's substantive criteria for determining the adequacy of MVEBs are set out in 40 CFR 93.118(e)(4). Additionally, to approve a motor vehicle emissions budget EPA must complete a thorough review of the SIP, in this case the $PM_{2.5}$ maintenance plan, and conclude that the SIP will achieve its overall purpose, in this case providing for maintenance of the 1997 annual $PM_{2.5}$ standard.

EPA's process for determining adequacy of a MVEB consists of three basic steps: (1) providing public notification of a SIP submission; (2) providing the public the opportunity to comment on the MVEB during a public comment period; and, (3) EPA taking action on the MVEB. The process for determining the adequacy of submitted SIP MVEBs is codified at 40 CFR 93.118.

What Are Safety Margins?

A "safety margin" is the difference between the attainment level of emissions from all sources and the projected level of emissions from all sources in the maintenance plan. As shown in Table 3, NO_X emissions in the Dayton area are projected to have safety margins of 13,343 tpy and 21,262 tpy in 2015 and 2022, respectively (the difference between the attainment year, 2008, emissions and the projected 2015 and 2022 emissions for all sources in the Dayton area). Table 2 shows direct $PM_{2.5}$ emissions in the Dayton area are projected to have a safety margin of 4479 tpy and 712 tpy in 2015 and 2022, respectively.

While, SO_2 emissions as shown on Table 4 are projected to decrease and produce safety margins of 27 tpy in 2015 and 301 tpy in 2022. Even if emissions reached the full level of the safety margin, the area would still demonstrate maintenance since emission levels would equal those in the attainment year.

The transportation conformity rule allows areas to allocate all or a portion of a "safety margin" to the area's motor vehicle emissions budgets (40 CFR 92.124(a)).

3. What Are the MVEBs for the Dayton Area?

The maintenance plan revision submitted by Ohio for the Dayton area contains primary $PM_{2.5}$ and NO_X MVEBs for the area for the years 2015 and 2022.

Ohio developed estimates for onroad mobile sources for the three counties in the Dayton area for 2005, 2008, 2015, and 2022. Ohio then summed the emissions for the Dayton area as shown on Table 6.

Table 6. Onroad Mobile Source Emissions for the Dayton Area (tpy)

	2005	2008	2015	2022
PM _{2.5} 871.08		724.75	351.68	227.24
NO_x	28,056.27	22,653.69	11,187.43	5,452.73
SO ₂	423.66	131.47	54.96	54.13

The transportation conformity rule allows areas to allocate all or a portion of a "safety margin" to the area's motor vehicle emissions budgets (40 CFR 93.124(a)). Ohio is not requesting allocation to the MVEBs of the entire available

safety margins reflected in the demonstration of maintenance. Therefore, even though the State has submitted MVEBs that exceed the projected onroad mobile source emissions for 2015 and 2022 contained in the demonstration of maintenance, the increase in onroad mobile source emissions that can be considered for transportation conformity purposes is well within the safety margins of the $PM_{2.5}$ maintenance demonstration. Further, once allocated to mobile sources, these safety margins will not be available for use by other sources.

Ohio did not provide emission budgets for SO_2 , VOCs, and ammonia because it concluded, consistent with the presumptions regarding these precursors in the conformity rule at 40 CFR 93.102(b)(2)(v), which predated and was not disturbed by the litigation on the $PM_{2.5}$ implementation rule, that emissions of these precursors from motor vehicles are not significant contributors to the area's $PM_{2.5}$ air quality problem.

EPA issued conformity regulations to implement the 1997

PM_{2.5} NAAQS in July 2004 and May 2005 (69 FR 40004, July 1, 2004

and 70 FR 24280, May 6, 2005, respectively). Those actions were

not part of the final rule recently remanded to EPA by the Court

of Appeals for the District of Columbia in NRDC v. EPA, No. 08
1250 (Jan. 4, 2013), in which the Court remanded to EPA the

implementation rule for the PM_{2.5} NAAQS because it concluded that

EPA must implement that NAAQS pursuant to the PM-specific

implementation provisions of subpart 4 of part D of title I of the CAA, rather than solely under the general provisions of subpart 1. That decision does not affect EPA's proposed approval of the Dayton MVEBs.

First, as noted above, EPA's conformity rule implementing the 1997 $PM_{2.5}$ NAAQS was a separate action from the overall $PM_{2.5}$ implementation rule addressed by the Court and was not considered or disturbed by the decision. Therefore, the conformity regulations were not at issue in NRDC v. EPA. 14 addition, as discussed in section III.B., the Dayton area is attaining the 1997 annual standard for $PM_{2.5}$ with a 2009-2011 design value of 12.9 $\mu g/m^3$, which is well below the annual $PM_{2.5}$ NAAQS of 15 $\mu q/m^3$. The modeling analysis conducted for the RIA for the 2012 PM NAAQS indicates that the design value for this area is expected to continue to decline through 2020. Further, Ohio's maintenance plan shows continued maintenance through 2022 by demonstrating that NO_X , SO_2 , and direct $PM_{2.5}$ emissions continue to decrease through the maintenance period. For VOC and ammonia, RIA inventories for 2007 and 2020 show that both

¹⁴ The 2004 rulemaking addressed most of the transportation conformity requirements that apply in $PM_{2.5}$ nonattainment and maintenance areas. The 2005 conformity rule included provisions addressing treatment of $PM_{2.5}$ precursors in MVEBs. See 40 CFR 93.102(b)(2). While none of these provisions were challenged in the NRDC case, EPA also notes that the Court declined to address challenges to EPA's presumptions regarding $PM_{2.5}$ precursors in the $PM_{2.5}$ implementation rule. NRDC v. EPA, at 27, n. 10.

onroad and total emissions for these pollutants are expected to decrease, supporting the State's conclusion, consistent with the presumptions regarding these precursors in the conformity rule, that emissions of these precursors from motor vehicles are not significant contributors to the area's PM_{2.5} air quality problem and the MVEBs for these precursors are unnecessary. The onroad VOC emissions are expected to go from 11,156 to 4,598 tpy and ammonia emissions are projected to decline from 430 to 240 tpy. With regard to SO₂, the 2005 final conformity rule (70 FR 24280) based its presumption concerning onroad SO₂ motor vehicle emissions budgets on emissions inventories that show that SO₂ emissions from onroad sources constitute a "de minimis" portion of total SO₂ emissions. As the emissions data on Tables 4 and 6 show, onroad emissions in 2022 are less than 0.6 percent of total SO₂ emissions in the area.

The availability of the SIP submissions with these 2015 and 2022 MVEBs was announced for public comment on EPA's Adequacy Website on October 6, 2011, for the 1997 annual $PM_{2.5}$ standard at:

http://www.epa.gov/otaq/stateresources/transconf/currsips.htm.

The EPA public comment periods on adequacy of the 2015 and 2022

MVEBs for the Dayton area closed on November 7, 2011. No

adverse comments on the submission were received during the adequacy comment period.

EPA has reviewed the submitted budgets for 2015 and 2022, including the added safety margins using the conformity rule's adequacy criteria found at 40 CFR 93.118(e)(4) and the conformity rule's requirements for safety margins found at 40 CFR 93.124(a). EPA has determined that the area can maintain attainment of the 1997 annual PM_{2.5} NAAQS for the relevant maintenance period with onroad mobile source emissions at the levels of the MVEBs since total emissions will still remain under attainment year emission levels. EPA is therefore proposing to approve the MVEBs submitted by Ohio for use in determining transportation conformity in the Dayton area.

V. Summary of Proposed Actions

EPA is proposing to determine that the Dayton area is attaining the 1997 annual PM_{2.5} NAAQS and that the area has met the requirements for redesignation under section 107(d)(3)(E) of the CAA. EPA is thus proposing to approve the requests from Ohio EPA to change the legal designations of the Dayton area from nonattainment to attainment for the 1997 annual PM_{2.5} standard. EPA is proposing to approve Ohio's PM_{2.5} maintenance plan for the Dayton area as a revision to the Ohio SIP because the plan meets the requirements of section 175A of the CAA. EPA is proposing to approve the 2005 and 2008 NO_X, direct PM_{2.5}, SO₂ emission inventories along with the 2007/2008 ammonia and VOC emissions inventories as meeting the comprehensive emissions

inventory requirements of section 172(c)(3) of the CAA. EPA is also proposing to find adequate and approve the MOVES-based NO_X and direct $PM_{2.5}$ 2015 and 2022 MVEBs for the Dayton area for transportation conformity purposes. These MVEBs will be used in future transportation conformity analyses for the area.

VI. Statutory and Executive Order Reviews

Under the CAA, redesignation of an area to attainment and the accompanying approval of a maintenance plan under section 107(d)(3)(E) are actions that affect the status of a qeographical area and do not impose any additional regulatory requirements on sources beyond those imposed by state law. A redesignation to attainment does not in and of itself create any new requirements, but rather results in the applicability of requirements contained in the CAA for areas that have been redesignated to attainment. Moreover, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, these proposed actions do not impose additional requirements beyond those imposed by state law and the CAA. For that reason, these proposed actions:

- are not "significant regulatory actions" subject to review by the Office of Management and Budget under Executive
 Order 12866 (58 FR 51735, October 4, 1993);
- do not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.);
- are certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 et seq.);
- do not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- do not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- are not economically significant regulatory actions based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- are not significant regulatory actions subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- are not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995
 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and

 do not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this proposed rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because a determination of attainment is an action that affects the status of a geographical area and does not impose any new regulatory requirements on tribes, impact any existing sources of air pollution on tribal lands, nor impair the maintenance of ozone national ambient air quality standards in tribal lands.

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List of Subjects

40 CFR Part 52

Environmental protection, Air pollution control,

Incorporation by reference, Intergovernmental relations,

Particulate matter.

40 CFR Part 81

Environmental protection, Air pollution control, National parks,

Wilderness areas.

Dated: July 12, 2013

Susan Hedman

Regional Administrator, Region 5

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